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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/813,444	03/20/2001	Brent Iverson	MXGN:005USC2	3269

7590 12/03/2007
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EXAMINER

DO, PENSEE T

ART UNIT	PAPER NUMBER
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1641

MAIL DATE	DELIVERY MODE
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12/03/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/813,444

Applicant(s)

IVERSON ET AL.

Examiner

Pensee T. Do

Art Unit

1641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 6-12, 15, 18-26 and 46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-8, 11, 12, 15 and 46 is/are rejected.
- 7) ☒ Claim(s) 9, 10, 18-26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Amendment Entry & Claims Status

The amendment filed on February 23, 2007 has been acknowledged and entered.

Claims 1-3, 6-12, 15, 18-26 and 46 are being examined.

Withdrawn Rejection(s)

All rejections in the previous office action are withdrawn herein.

Claim Objections

Claims 18-26 are objected to because of the following informalities: Claim 18 still depends from a cancelled claim 17. As a result, claims 18-26 have not been treated on the merits. Appropriate correction is required.

New Grounds of Rejection

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 6, 46 are rejected under 35 U.S.C. 102(b) as being anticipated by Rowlands (WO 93/01296).

Rowlands teaches a method comprising obtaining vectors of vaccinia viruses (multiple copies of vectors is a library) which are capable of expressing a plurality of a candidate antibody on the cell surface; transfecting such vectors into eukaryotic host cells; recovering antibodies from the culture medium of cells (selecting host cell that expresses the desired antibody) by using an antigen that is specific for such antibody. (see abstract). For claim 46, Rowlands teaches the host cell is a mammalian cell. (see abstract; pg. 2-10; examples 1-6).

Claims 1, 6, 7, 11, 12 and 46 are rejected under 35 U.S.C. 102(e) as being anticipated by Wigler et al. (US 5,780,225).

Wigler teaches a method of selecting a eukaryotic host cell that expresses a desired antibody/fragment from a plurality of eukaryotic host cells. The method comprises obtaining a library of vectors, i.e. light chain and heavy chain vectors (a plurality of vectors is a library). (see col. 9, lines 53-65); expressing each of the plurality of candidate antibodies or fragments on the surface of a host cell (see col. 13, lines 5-14); selecting a host cell that expresses a desired antibody/fragment by using an antigen. (see col. 10, lines 5-12). For claim 7, the antigen is labeled. (see col. 10, lines 40-44). For claim 11, Wigler teaches administering to an animal a selected antigen (immunizing animals); obtaining from the animal a plurality of distinct DNA segments that encode distinct antibodies or fragments; (see col. 12, lines 19-25); and incorporating said DNA segments into a plurality of expression vectors which express

the antibodies/fragments on the outer membrane surface of a host cell. (see col. 9, lines 53-65). For claim 12, Wigler teaches isolating mRNA from antibody-producing cells of said animals (see col. 12, lines 19-25); amplifying said RNA segments using a set of nucleic acids primers (see col. 8, lines 5-20). For claim 46, the host cell is a mammalian cell. (see claim 10).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 3 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wigler or Rowlands in view of Yokoyama (US 5,646,011).

Wigler and Rowland fail to teach that the host cells are yeast, mold, or algae or insect. Wigler also fails to teach a fluorescent label.

Yokoyama teaches a method of identifying tumor cells by contacting a sample of tumor cells with a molecule which binds to the protein isolated. Such molecule is labeled with a fluorescent marker, radioactive isotope or enzyme. (see col. 3, lines 50-60). The protein is isolated by incorporated the nucleic acids into a recombinant expression vector which ensures good expression of the nucleic acids in a host cell. (see col. 10, lines 50-55). The host cells are prokaryotic or eukaryotic cells such as insect cells, yeast, or mammalian cells. (see col. 11, lines 10-15).

It would have been obvious to one of ordinary skills in the art to use a fluorescent label as taught by Yokoyama as an alternative of the radioactive label taught in the method of Wigler or Rowlands because it is well known that Fluorescent labels are preferred over radioactive labels in general because the former do not require special handling of waste, long detection times or large sample volumes. It would have been obvious to one of ordinary skills in the art to use other host cells such as insect or yeast cells so that protein expression can be studied on a variety of host cells other than mammalian. Thus, diagnostic conditions on cells other than mammalian cells can be studied as well.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wigler or Rowlands in view of Slamon (US 4,918,162).

Rowlands and Wigler have been discussed above but fail to teach cleaving the antibody from the cell membrane.

Slamon teaches selected host cells that express a desired antibody are subjected to cleavage to release the selected antibody or antibody fragment from the surface of the outer membrane. (see col. 7, lines 27-50).

Since Rowlands and Wigler teaches that the antibodies expressed in host cell of their inventions are membrane-bound type and Slamon teaches releasing the selected antibody from the surface of the outer membrane, it would have been obvious to one of ordinary skills in the art to cleave the antibodies of Rowlands or Wigler for further analysis of the membrane antibodies or for therapeutic purposes.

Allowable Subject Matter

Claims 9 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to claims 1-3, 6-8, 11-12, 15, 18-26 and 46 have been considered but are moot in view of the new ground(s) of rejection.

Claims 18-26 have not been treated on the merits because their dependence is unclear at this point.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pensee T. Do whose telephone number is 571-272-0819. The examiner can normally be reached on Monday-Friday, 8:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on 571-272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Pensee T. Do
Patent Examiner
October 25, 2007



CHRISTOPHER L. CHIN
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GROUP 1800/611